

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for tracing services on an application server comprising:

identifying a group of services executed on an application server, said group of services including:

a database connectivity service;

a transport protocol service for a network that said application server is coupled to;

a web based service that is implemented with a web page and a business logic component;

for each service in the group, identifying an interconnection to another one of the services in the group such that a plurality of interconnections are identified, each of the interconnections having respective entry and/or exit methods that correspond to entry and/or exit points to and/or from its corresponding service a group of entry and/or exit methods to be traced, the group entry/exit methods representing entry and exit points to and from service respectively entry/exit methods representing and exit points to and from service, respectively;

modifying bytecode of the respective entry and/or exit methods the service's bytecode based on the particular group of entry/exit methods specified;

executing the group of services such that the interconnections are utilized; and, tracing invocations of the respective entry and/or exit methods registering method invocations of the entry/exit methods.

2. (Previously Presented) The method as in claim 1 wherein the application server is a server executing object-oriented program code and wherein the group of services comprise object-oriented services.

3. (Currently Amended) The method as in claim 2 wherein ~~one of the group of~~ the transport protocol service[[s]] comprises a hypertext transport protocol service ("HTTP") service.

4. (Currently Amended) The method as in claim 3 wherein ~~one of the groups of~~ services web page comprises a servlet and/or a Java Server Page (JSP) service and wherein at least one of the ~~entry/exit methods comprise~~ entry/exit methods linking interconnections link the servlet and/or ~~server page service~~ JSP to the HTTP service.

5. (Canceled)

6. (Currently Amended) The method as in claim 1 wherein registering the tracing of the method invocations further comprises:

collecting parameters passed between the respective entry and/or exit methods ~~method-related information associated with each of the entry/exit methods~~ responsive to the invocations.

7. (Currently Amended) The method as in claim 6 wherein the ~~method-related~~ information tracing of the method invocations further comprises counting a number

times that each method of ~~the~~ a set of methods is executed.

8. (Canceled)

9. (Currently Amended) The method as in claim 1 wherein the ~~entry/exit methods are entry and exit points between a service and an external system~~ group of services further comprise: an interface to a proprietary system.

10. (Currently Amended) The method as in claim 9 wherein the database connectivity ~~service is a Connector service and the~~ connects to an external system ~~is a~~ database system.

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Currently Amended) A computer system for tracing program flow of services within an application server, the computer system comprising a memory for storing program code and a processor for processing the program code to perform the operations of:

identifying a group of services executed on an application server, said group of services including:

a database connectivity service;

a transport protocol service for a network that said application server is coupled to;

a web based service that is implemented with a web page and a business logic component;

for each service in the group, identifying an interconnection to another one of the services in the group such that a plurality of interconnections are identified, each of the interconnections having respective entry and/or exit methods that correspond to entry and/or exit points to and/or from its corresponding service a group of entry and/or exit methods to be traced, the group entry/exit methods representing entry and exit points to and from service respectively entry/exit methods representing and exit points to and from service, respectively;

modifying bytecode of the respective entry and/or exit methods the service's bytecode based on the particular group of entry/exit methods specified;

executing the group of services such that the interconnections are utilized; and, tracing invocations of the respective entry and/or exit methods registering method invocations of the entry/exit methods.

15. (Previously Presented) The system as in claim 14 wherein the application server is a server ~~executing~~ that executes object-oriented program code and wherein the group of services ~~comprise~~ object-oriented services.

16. (Currently Amended) The system as in claim 15 wherein ~~one of the group of~~ the transport protocol service[[s]] comprises a hypertext transport service protocol ("HTTP") service.

17. (Currently Amended) The system as in claim 16 wherein ~~one of the groups of~~ services web page comprises a servlet and/or a Java Server Page service (JSP) and wherein at least one of the ~~entry/exit methods comprise~~ entry/exit methods linking interconnections link the servlet and/or ~~server page service~~ JSP to the HTTP service.

18. (Canceled)

19. (Currently Amended) The system as in claim 14 wherein ~~registering~~ the tracing of the method invocations further comprises: collecting parameters passed between the entry and/or exit methods ~~method-related information~~ associated with each of the entry/exit methods responsive to the invocations.

20. (Currently Amended) The system as in claim 19 wherein the ~~method-related~~ information tracing of the method invocations further comprises counting a number times that each method of ~~the~~ a set of methods is executed.

21. (Canceled)

22. (Currently Amended) The system as in claim [[19]] 14 wherein the group of services further comprise: an interface to a proprietary system ~~entry/exit methods are entry and exit points between a service and an external system.~~

23. (Currently Amended) The system as in claim 22 wherein the database connectivity service is a Connector service and the connects to an external system ~~is an database system.~~

24. (Canceled)

25. Canceled

26. (Canceled)

27. (Currently Amended) The system as in claim 19 wherein the program code causes the processor to execute a handler to perform one or more specified output functions on the method invocations ~~and/or the method-related information.~~

28. (Currently Amended) The system as in claim 27 wherein one of the output functions

comprises directing information collected from the method invocations and/or method-related information to a display.

29. (Original) An article of manufacture including program code which, when executed by one or more processors ~~a machine~~, causes the ~~machine~~ one or more processors to perform the operations of:

identifying a group of services executed on an application server, said group of services including:

a database connectivity service;

a transport protocol service for a network that said application server is coupled to;

a web based service that is implemented with a web page and a business logic component;

for each service in the group, identifying an interconnection to another one of the services in the group such that a plurality of interconnections are identified, each of the interconnections having respective entry and/or exit methods that correspond to entry and/or exit points to and/or from its corresponding service a group of entry and/or exit methods to be traced, the group entry/exit methods representing entry and exit points to and from service respectively entry/exit methods representing and exit points to and from service, respectively;

modifying bytecode of the respective entry and/or exit methods the service's bytecode based on the particular group of entry/exit methods specified;

executing the group of services such that the interconnections are utilized; and, tracing invocations of the respective entry and/or exit methods registering method

~~invocations of the entry/exit methods.~~

30. (Previously Presented) The article of manufacture as in claim 29 wherein the application server is a server executing object-oriented program code and wherein the group of services comprise object-oriented services.

31. (Currently Amended) The article of manufacture as in claim 30 wherein ~~one of the group of~~ the transport protocol service[[s]] comprises a hypertext transport service protocol ("HTTP") service

32. (Currently Amended) The article of manufacture as in claim 31 wherein ~~one of the groups of services~~ web page comprises a servlet and/or a Java Server Page service (JSP) and wherein at least one of the ~~entry/exit methods comprise entry/exit methods~~ linking connections link the servlet and/or ~~server-page-service~~ JSP to the HTTP service.

33. (Canceled)

34. (Currently Amended) The article of manufacture as in claim 29 wherein ~~registering the tracing of the method invocations~~ further comprises:

~~collecting parameters passed between the entry and/or exit methods~~
~~method-related information associated with each of the entry/exit methods~~
~~responsive to the invocations.~~

35. (Currently Amended) The article of manufacture as in claim 34 wherein the
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~~method-related information~~ tracing of the method invocations further comprises counting a number times that each method of ~~the~~ a set of methods is executed.

36. - 41. (Canceled).